

FREMONT

WATER SOLUTIONS

3-1-2021: File reviewed, more current MSDS/SDS not available. JMC

FREMONT BWT 4331 Boiler Water Treatment

Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date: 02/01/2015

Supersedes: 12/28/2010

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name : FREMONT BWT 4331 Boiler Water Treatment
Product form : Mixture

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Boiler water treatment

1.3. Details of the supplier of the safety data sheet

FREMONT INDUSTRIES, INC.
4400 Valley Industrial Blvd. N.
P.O. Box 67
Shakopee, MN 55379-0067

1.4. Emergency telephone number

Emergency number : (952) 445-4121
CHEMTREC: (800) 424-9300

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Skin Corr. 1A H314

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US)



GHS05

Signal word (GHS-US)

Danger

Hazard statements (GHS-US)

H314 - Causes severe skin burns and eye damage

Precautionary statements (GHS-US)

P260 - Do not breathe mists
P264 - Wash skin thoroughly after handling
P280 - Wear eye protection, face protection, protective clothing, protective gloves
P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting
P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
P304+P340 - IF INHALED: remove victim to fresh air and keep at rest in a position comfortable for breathing
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310 - Immediately call a POISON CENTER or doctor/physician
P321 - Specific treatment (see first aid instructions on this label)
P363 - Wash contaminated clothing before reuse
P405 - Store locked up
P501 - Dispose of contents/container to licensed waste handling facility

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

No data available

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SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%
Potassium hydroxide	(CAS No) 1310-58-3	7 - 13
Diethylaminoethanol	(CAS No) 100-37-8	1 - 5

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
- First-aid measures after inhalation : IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
- First-aid measures after skin contact : IF ON SKIN: Immediately rinse with plenty of water (for at least 15 minutes). Get medical advice/attention.
- First-aid measures after eye contact : IF IN EYES: Rinse immediately and thoroughly, pulling the eyelids well away from the eye (15 minutes minimum). Get medical advice/attention.
- First-aid measures after ingestion : IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries : Causes severe skin burns and eye damage.
- Symptoms/injuries after inhalation : May cause headache, nausea and irritation of respiratory tract.
- Symptoms/injuries after skin contact : Highly corrosive to skin.
- Symptoms/injuries after eye contact : Causes serious eye burns.
- Symptoms/injuries after ingestion : Severe irritation or burns to the mouth, throat, esophagus, and stomach. Possible esophageal perforation.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- suitable extinguishing media : Water spray. Carbon dioxide. Alcohol-resistant foam. Dry powder.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : Product is not flammable.
- Explosion hazard : Product is not explosive.
- Reactivity : No dangerous reactions known under normal conditions of use.

5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Do not dispose of fire-fighting water in the environment.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Evacuate area. Keep upwind. Ventilate area. Spill should be handled by trained clean-up crews properly equipped with respiratory equipment and full chemical protective gear (see section 8).

6.1.1. For non-emergency personnel

- Protective equipment : Wear Protective equipment as described in Section 8.
- Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment : Wear suitable protective clothing, gloves and eye or face protection. Approved supplied-air respirator, in case of emergency.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

- For containment : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
- Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Place in a suitable container for disposal in accordance with the waste regulations (see Section 13).

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6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling

Do not handle until all safety precautions have been read and understood. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Do not breathe mists. Keep away from sources of ignition - No smoking.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions

Keep only in the original container in a cool, well ventilated place away from Heat sources. Keep container closed when not in use.

Incompatible products

Strong oxidizers. Strong acids.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Potassium hydroxide (1310-58-3)	
ACGIH Ceiling (mg/m ³)	2 mg/m ³
OSHA PEL (Ceiling) (mg/m ³)	2 mg/m ³ vacated
Diethylaminoethanol (100-37-8)	
ACGIH TWA (ppm)	2 ppm
OSHA PEL (TWA) (mg/m ³)	50 mg/m ³
OSHA PEL (TWA) (ppm)	10 ppm

8.2. Exposure controls

Appropriate engineering controls

Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Gloves. Protective goggles. Face shield. Protective clothing. Respiratory protection of the dependent type.



Hand protection

Protective gloves made of rubber.

Eye protection

Eye protection, including both chemical splash goggles and face shield, must be worn when possibility exists for eye contact due to spraying liquid or airborne particles.

Skin and body protection

Corrosionproof clothing.

Respiratory protection

An approved organic vapor respirator/supplied air or self-contained breathing apparatus must be used when vapor concentration exceeds applicable exposure limits.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid
Color	Dark brown.
Odor	Ammonia-like
Odor Threshold	No data available
pH	12.5 - 14
Relative evaporation rate (butyl acetate=1)	No data available
Melting point	No data available
Freezing point	No data available
Boiling point	100 °C
Flash point	93.3 °C
Self ignition temperature	No data available
Decomposition temperature	No data available
Flammability (solid, gas)	No data available
Vapor pressure	No data available
Relative vapor density at 20 °C	No data available

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Relative density	1.16
Solubility	Complete solubility in water.
Log Pow	No data available
Log Kow	No data available
Viscosity, kinematic	No data available
Viscosity, dynamic	No data available
Explosive properties	No data available
Oxidizing properties	No data available
Explosive limits	No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known under normal conditions of use.

10.2. Chemical stability

Stable under recommended handling and storage conditions (see section 7).

10.3. Possibility of hazardous reactions

None known.

10.4. Conditions to avoid

Sparks. Heat. Open flame.

10.5. Incompatible materials

Oxidizing agent. Strong acids. Soft metals (aluminum, copper, brass).

10.6. Hazardous decomposition products

Thermal decomposition generates Carbon oxides (CO, CO2) Sulfur oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Potassium hydroxide (1310-58-3)	
LD50 oral rat	214 mg/kg

Diethylaminoethanol (100-37-8)	
LD50 oral rat	1300 mg/kg (Source: IUCLID)
LD50 dermal rabbit	1260 µl/kg (Source: NLM_CIP)
ATE (oral)	1300.000 mg/kg body weight
ATE (dermal)	1100.000 mg/kg body weight
ATE (dust, mist)	1.500 mg/l/4h

Skin corrosion/irritation	Causes severe skin burns and eye damage. pH: 12.5 - 14
Serious eye damage/irritation	Not classified pH: 12.5 - 14
Respiratory or skin sensitization	Not classified
Germ cell mutagenicity	Not classified
Carcinogenicity	Not classified
Reproductive toxicity	Not classified
Specific target organ toxicity (single exposure)	Not classified
Specific target organ toxicity (repeated exposure)	Not classified
Aspiration hazard	Not classified
Symptoms/injuries after inhalation	May cause headache, nausea and irritation of respiratory tract.
Symptoms/injuries after skin contact	Highly corrosive to skin.
Symptoms/injuries after eye contact	Causes serious eye burns.
Symptoms/injuries after ingestion	Severe irritation or burns to the mouth, throat, esophagus, and stomach. Possible esophageal perforation.

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SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : No data available

12.2. Persistence and degradability

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Persistence and degradability : No data available.

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Other adverse effects : No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Do not discharge to public wastewater systems without permit of pollution control authorities. No discharge to surface waters is allowed without an NPDES permit.

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Do not allow the product to be released into the environment.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

Transport document description : UN1760, CORROSIVE LIQUIDS, N.O.S. (POTASSIUM HYDROXIDE, DIETHYLAMINOETHANOL), 8, PGII

UN-No.(DOT) : 1760

DOT NA no. : UN1760

14.2. UN proper shipping name

DOT Proper Shipping Name : Corrosive liquids, n.o.s.
(Potassium hydroxide, Diethylaminoethanol)

Department of Transportation (DOT) Hazard Classes : 8 - Class 8 - Corrosive material 49 CFR 173.136

Hazard labels (DOT) : 8 - Corrosive substances



DOT Symbols : G - Identifies PSN requiring a technical name

Packing group (DOT) : II - Medium Danger

14.3. Additional information

Other information : No supplementary information available.

Overland transport

No additional information available

Transport by sea

DOT Vessel Stowage Location : B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.

DOT Vessel Stowage Other : 40 - Stow "clear of living quarters"

Air transport

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 1 L

DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 30 L

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SECTION 15: Regulatory information

15.1. US Federal regulations

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All chemical substances in this product are listed in the EPA (Environmental Protection Agency) TSCA (Toxic Substances Control Act) Inventory	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard
Potassium hydroxide (1310-58-3)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Listed on SARA Section 313 (Specific toxic chemical listings)	
RQ (Reportable quantity, section 304 of EPA's List of Lists)	1000 lb
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard
Diethylaminoethanol (100-37-8)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

15.2. International regulations

CANADA

Potassium hydroxide (1310-58-3)	
Listed on the Canadian DSL (Domestic Substances List) inventory	
Diethylaminoethanol (100-37-8)	
Listed on the Canadian DSL (Domestic Substances List) inventory	

No additional information available

15.2.2. National regulations

Potassium hydroxide (1310-58-3)	
Listed on the AICS (the Australian Inventory of Chemical Substances)	
Listed on Inventory of Existing Chemical Substances (IECSC)	
Listed on the Japanese ENCS (Existing & New Chemicals Substances) inventory	
Listed on KECI (Chemical Inventory of Korea)	
Diethylaminoethanol (100-37-8)	
Listed on the AICS (the Australian Inventory of Chemical Substances)	
Listed on Inventory of Existing Chemical Substances (IECSC)	
Listed on the Japanese ENCS (Existing & New Chemicals Substances) inventory	
Listed on KECI (Chemical Inventory of Korea)	

15.3. US State regulations

Potassium hydroxide (1310-58-3)	
U.S. - Massachusetts - Right To Know List	
U.S. - New Jersey - Right to Know Hazardous Substance List	
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List	
Diethylaminoethanol (100-37-8)	
U.S. - Massachusetts - Right To Know List	
U.S. - New Jersey - Right to Know Hazardous Substance List	
U.S. - Pennsylvania - RTK (Right to Know) List	

SECTION 16: Other information

Indication of changes

Revision 1.0 - (October 2013) - New SDS Created.

Other information

Author: ERM

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NFPA health hazard

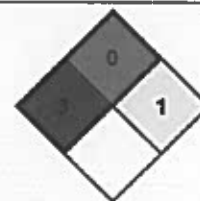
- 3 - Short exposure could cause serious temporary or residual injury even though prompt medical attention was given

NFPA fire hazard

- 0 - Materials that will not burn.

NFPA reactivity

- 1 - Normally stable, but can become unstable at elevated temperatures and pressures or may react with water with some release of energy, but not violently.



HMIS III Rating

Health

3

Flammability

0

Physical

1

Personal Protection

Wear suitable protective clothing, gloves and eye/face protection.

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